

Project proposal summary of Apache Lake Fish Habitat Improvement Project (ALFHIP)

The Arizona Game and Fish Department proposes to take advantage of an opportunity to install fish habitat at Apache Lake in November and December, 2006 during a planned 50 foot drawdown of the lake by SRP for maintenance and repair on Horse Mesa dam. The plan is to use natural and artificial materials that will be anchored on the dry lakebed prior to refilling the lake in January 2007.

Woody fish habitat with respect to underwater trees and natural structure is lacking at Apache Lake due to its age (70 plus years). This type of environment serves as hiding cover and shelter for structure-seeking fish species such as bass, crappie, bluegill sunfish and catfish. Water levels will be dropped to the 50' level by November 6. Planned refilling will begin on December 18 and by January 20, 2007 the lake will be at its normal winter level of 1905' msl or 9 feet from maximum. Activities to transport and construct habitat devices in-place along designated shorelines will begin November 17th after which time the lakebed should be dry enough to walk upon. Timeframe of habitat installation phase (construction period) will be about 4-5 weeks.

There are 8 pre-selected sites on Apache Lake that were chosen due to their topography as ledges close to deep water or sloping bare shorelines that offer the best enhancement opportunities. Habitat devices will be constructed at a depth of 25 feet below the high water maximum and not be over 10 feet in height. This will insure that there will not be hazardous conflicts with the boating public during normal varying water levels when pump-back operations and winter levels are occurring.

Juniper trees and wooden pallets are the materials of choice as they are readily available, durable and are cost-effective. These materials have been proven as successful components in fish habitat enhancements in other central Arizona reservoirs. The materials will be tied together using 36 inch zip-ties to form pyramids and will be anchored with cement blocks. A synergistic effect of the wooden pallet frames and natural cover within juniper trees has proven to be an effective design to attract a wide variety of fish species and sizes. Groups of these devices (a.k.a. "Pisces Pyramids") will be clumped together rather than constructed in lines or rows to optimize this effect.

Juniper trees will be acquired from thinning projects on the U.S.F.S. Pleasant Valley Ranger District near Young, Arizona. They will then be transported to holding areas at Burnt Corral and the Main Marina that began in October 2006, where they are being stored in a secure fenced yard. Pallets and blocks will similarly be hauled from the metro-Phoenix area and placed in these fenced areas. When the installation phase of the project begins, pontoon boats will haul trees, pallets, connecting materials and weight construction blocks to designated sites for building operations by volunteers. *This project is for volunteers age 16 and older.*

By: *Jim Warnecke*
ALFHIP Coordinator



Picture of "Pisces Pyramid" fish habitat